

IN THE CLAIMS

1. (currently amended) A process ~~for comprising~~ coating a surface ~~surfaces~~ of a metallic object ~~objects~~, in particular as a pretreatment for cold shaping or as a pretreatment for a metal-rubber composite or for adjusting the coefficients of friction of connecting elements for use of these connecting elements, such as e.g. screws for screwing, characterized in that the metallic ~~objects~~, which are optionally already precoated, are coated with an aqueous, acidic composition comprising: ~~containing phosphate, which comprises~~

8 to 50 g/l of phosphate, calculated as PO_4 ,

0.5 to 30 g/l of zinc ions,

0 to 5 g/l of manganese ions,

0 to 8 g/l of calcium ions,

0 to 5 g/l of magnesium ions,

wherein at least 0.1 g/l of calcium or/and magnesium ions are present,

0.1 to 5 g/l of nitroguanidine,

0.1 to 10 g/l in total of chlorate or/and peroxide ions,

in total 0 to 16 g/l of complex fluoride (MeF_4 or/and MeF_6) of $\text{Me} = \text{B}, \text{Si}, \text{Ti}, \text{Hf}$

or/and Zr and

0 to 5 g/l of fluoride ions

wherein the total content of complex fluoride and fluoride ions is in the range from 0.1 to 18 g/l.

Claims 2-16 (cancelled)

17. (new) A process according to claim 1, wherein the composition comprises not more than 1 g/l of nitrate.

18. (new) A process according to claim 1, wherein the composition comprises not more than 0.5 g/l of nitrite.

19. (new) A process according to claim 1, wherein the composition comprises complex fluoride or/and fluoride ions to magnesium ions in a ratio of (MeF_4 , MeF_6 or/and F^-) : Mg in the range from 0.1 : 1 to 10 : 1.

20. (new) A process according to claim 1, wherein the composition comprises complex fluoride or/and fluoride ions to calcium ions in a ratio of (MeF_4 , MeF_6 or/and F^-) : Ca in the range from 0.1 : 1 to 10 : 1.

21. (new) A process according to claim 1, wherein the composition further comprises up to 2 g/l nickel ions.

22. (new) A process according to one of the preceding claims, characterized in that the composition comprises chloride ions in the range up to 5 g/l.

23. (new) A process according to claim 1, wherein the composition further comprises up to 2 g/l sulfate ions.

24. (new) A process according to claim 1, wherein the composition comprises fluoroborate.

25. (new) A process according to claim 24, wherein the composition comprises from 0.1 to 5 g/l BF_4 .

26. (new) A process according to claim 24, wherein the composition comprises from 0.2 to 3 g/l BF_4 .

27. (new) A process according to claim 1, wherein the pH of the composition is maintained in the range from 0.1 to 4.

28. (new) A process according to claim 1, wherein a phosphate layer which has a layer thickness in the range from 0.02 to 15 μm or/and a layer weight in the range from 0.5 to 25 g/m^2 is formed on said surface.

29. (new). A process according to claim 1, wherein a phosphate layer which has an average edge length of the phosphate crystals of less than 20 μm or even of less than 10 μm and at the same time has a layer thickness with a layer weight in the range of 1.5 to 18 g/m^2 is formed on the surface.

30. (new) A process according to claim 29, wherein the layer weight is from 2 to 15 g/m^2 .

31. (new) A process according to claim 1, wherein after the formation of the phosphate layer at least one layer comprising lubricant is applied.

32. (new) A process for coating surfaces of metallic objects with a phosphating solution, wherein the ratio of the pickling erosion on the metallic surface, measured in g/m^2 , to the layer weight of the phosphate layer, measured in g/m^2 , lies at values below 75%.

33. (new) An aqueous phosphating solution comprising:

8 to 100 g/l of phosphate, calculated as PO_4 ,

0.5 to 60 g/l of zinc ions,

0 to 10 g/l of manganese ions,

0 to 16 g/l of calcium ions,

0 to 10 g/l of magnesium ions,

wherein at least 0.1 g/l of calcium or/and magnesium ions are present,

0.05 to 10 g/l of nitroguanidine,
0 to 2 g/l of nitrate,
0.1 to 10 g/l in total of chlorate or/and peroxide ions,
in total 0 to 16 g/l of complex fluoride (MeF_4 or/and MeF_6) of $\text{Me} = \text{B}, \text{Si}, \text{Ti}, \text{Hf}$
or/and Zr and
0 to 5 g/l of fluoride ions
wherein the total content of complex fluoride and fluoride ions is in the range
from 0.1 to 18 g/l.

34. (new) A metallic object coated produced by the process of claim 1.